

Choosing Low Fat Milk and Milk Products - Teacher Guide

Objectives:

Participants will learn:

1. why milk and milk products are important in their diet.
2. the best sources of calcium come from milk, cheese and yogurt.
3. how to include fat free and low fat milk and milk products in meals and snacking.

Sample ANCHOR questions for participants:

Scenario 1

“Milk and milk products are very important for building strong bones in children. Let me help you find ways to feed your children so they can have strong bones.”

“Will your family drink milk?” If they do not, ask why? Is it because of personal/ethnic food preferences or are they possibly lactose-intolerant? (A handout is included on lactose-intolerance: ***“Do You Like Milk But It Doesn’t Seem To Like You?”***. This may be an important issue with certain audiences and needs to be addressed.)

1. If they drink milk – ***“What kind of milk do you serve your family; whole, low fat or nonfat (fat free)?”***
2. If they do not drink milk ask what other milk products or calcium fortified foods do they eat and drink. ***“Will your family eat cheese, yogurt or calcium fortified juices, cereals and breads?”*** You may want to make a list of all the dairy foods mentioned. Make the list so everyone can see it. You can use this list later when talking about low fat and nonfat dairy choices or ways to add more dairy foods to your diet.

Scenario 2

“Milk and milk products are very important for building strong bones and keeping your bones strong. Let me help you find ways to plan meals that are good for your bones.”

“Do you drink milk?” If they do not, ask why? Is it because of personal/ethnic food preferences or are they possibly lactose-intolerant? (A handout is included on lactose-intolerance: ***“Do You Like Milk But It Doesn’t Seem To Like You?”***. This may be an important issue with certain audiences and needs to be addressed.)

1. If they drink milk – ***“What kind of milk do you drink; whole, low fat or nonfat (fat free)?”***
2. If they do not drink milk ask what other milk products or calcium fortified foods do they eat and drink. ***“Will you eat cheese, yogurt or calcium fortified juices, cereals and breads?”*** You may want to make a list of all the dairy foods mentioned. Make the list so everyone can see it. You can use this list later when talking about low fat and nonfat dairy choices or ways to add more dairy foods to your diet.

Once you know your audience better you can begin to plan how you want to present your information. I will suggest some topics, questions to ask and some basic calcium information. Choose the appropriate information below to **ADD** to your lesson according to the **NEEDS** of your particular audience.

Background Information for *Instructors*

Foods in the milk group provide nutrients that are important for health and maintenance of your body. These nutrients include calcium, potassium, vitamin D, and protein.

Health benefits of milk and milk products

- Diets rich in milk and milk products help build and maintain bone mass throughout the lifecycle. This may reduce the risk of osteoporosis.
- The intake of milk products is especially important to bone health during childhood and adolescence, when bone mass is being built.
- Diets that include milk products tend to have a higher overall nutritional quality.

Your body cannot make its own calcium, so it is up to you to supply it on a regular basis. Milk, yogurt, and cheese are the best sources of the mineral calcium.

MyPyramid recommends 3 cups of milk each day

- 2-8 year olds need 2 cups of milk each day
- 9 year olds and persons older need 3 cups of milk each day

Adequate Intakes for Calcium	
Age	Milligrams per day
1 - 3	500
4 - 8	800
9 -18	1,300
19 - 50	1,000
51 >	1,200
Pregnant women ≤ 18 years	1,300
19 – 50 years	1,000
Lactating women ≤ 18 years	1,300
19 – 50 years	1,000

For those who choose not to drink or eat milk products

- If you avoid milk because of lactose intolerance, choose lactose-free milk products such as cheese, yogurt, or lactose-free milk, or to consume the enzyme lactase before consuming milk products.
- Calcium choices for those who do not consume milk products include:

- Calcium fortified juices, cereals, breads, soy beverages, or rice beverages
- Canned fish (sardines, salmon with bones) soybeans and other soy products (soy-based beverages, soy yogurt, tempeh), some other dried beans, and some leafy greens (collard and turnip greens, kale, bok choy). The amount of calcium that your body absorbs from these foods varies.

Milk Choices.

2% Milk is Reduced Fat Milk

1% Milk is Low fat Milk

Skim is Nonfat Milk or Fat Free Milk

With the information that follows, discuss the fat content in whole vs. reduced fat vs. low fat vs. fat free milk. Small changes can add up to a big reduction of fat in your diet. A change from whole milk products to fat free or low fat products is one way to reduce fat and calories. Suggest they switch from whole milk to fat free milk gradually (whole milk, then reduced fat milk, then low fat milk then fat free milk).

Milk	FATS IN MILK			Fat over 1 week* (gram)
	Calories	Fat (gram)		
1 cup whole	150	8	I	168
1 cup reduced fat	120	5	I	105
1 cup low fat	100	3	I	63
1 cup fat free	90	0	I	9

*Three glasses each day

However, while fat free milk may be the best choice for people over the age of two, **low fat and fat free milk may be harmful for children under two**. Children under the age of two need fat and calories for normal growth and development. Fat free and low fat dairy products are not recommended for children under two.

ACTIVITIES (APPLY):

1. Since the fat in milk is "hidden", it is difficult to tell just how much fat is in the different types of milk. To illustrate this, use fat tubes or make your own display using solid shortening to go along with the chart **Fats in Milk**. 1 gram of fat is equal to about 1/4 teaspoon shortening. Discuss how to use fat free milk in cooking (pudding, macaroni & cheese, soups, etc.) and how this can offer extra fat "savings".
2. There are many dairy products on the market being offered in low fat or fat free versions. Make a display of several of these including such products as dry milk,

evaporated milk, sour cream, cream cheese, cottage cheese, and even sweetened condensed milk. Again, reading the labels will add more proof of the savings of fat grams (and is good practice for everyone.)

3. As a group, have participants come up with ways to add more low fat and fat free dairy foods to their diets. Ask for suggestions. Provide paper and pencils. They may want to write the suggestions down and take them home.

Suggestions:

- Drink milk with meals and snacks.
- Top casseroles and salads with grated cheese.
- Add 2 tablespoons nonfat dry milk to every quart of milk. (1 Tbsp. Nonfat dry milk adds 52 mg. of calcium and 15 calories.
- Combine cottage cheese with fresh, canned or dried fruit for a quick snack, breakfast, lunch or salad.
- Eat canned fish with bones (sardines, salmon).
- Cook hot cereals in milk instead of water.
- Serve calcium-fortified orange juice, ready-to-eat cereals, etc.
- Top a steamy baked potato with nonfat yogurt or shredded mozzarella cheese.
- Use fat free yogurt to replace mayonnaise in salad dressings and dips.
- Use fat free milk instead of water when preparing hot soups or cereals.
- Add dry milk (1/2 cup per pound of meat) to meat loaf mixture before baking.

4. Display cartons of whole, reduced fat, low fat, and skim milk. Examine the labels (per serving):

Whole Milk

150 calories
8 g fat
5 g saturated fat
300 mg calcium

2% - Reduced Fat Milk

120 calories
5 g fat
3 g saturated fat
300 mg calcium

1% - Low Fat Milk

100 calories
2.5 g fat
1.5 g saturated fat
300 mg calcium

Fat Free Milk

80 calories
0 g fat
0 g saturated fat
300 mg calcium

5. **Exercise + Calcium-Rich Foods = Strong Bones** Explain to participants that besides eating calcium-rich foods, exercise is needed to help build strong bones. Discuss fun ways to get exercise such as dancing, playing ball or swimming. Don't forget to identify everyday ways to exercise, such as taking the stairs and walking the dog. Make a list of all the suggestions. Then ask the participants to set goals for the week. Distribute paper or booklets so each person can make their own exercise diary. Encourage each person to work on achieving their goal. See word scramble handout: **Exercise + Calcium-Rich Foods = Strong Bones**

6. Recipes: "Foods to Grow On" (AWAY)

Activities for school-age students:

7. Have students estimate how much calcium was in their diet yesterday. Use handout: "How Much Calcium Are You Getting Each Day?" See if their amount meets the recommended daily calcium intake. Have participants compare their calcium intake to the values listed in the handout: "Daily Calcium Requirements".

8. Calcium in the body.

The body deposits great amounts of calcium during growth years. Use clear plastic bags and white flour to represent the approximate amount of calcium in the body at different ages.

Age Period	Amount of Calcium
Infancy	1 ounce (1/4 cup flour)
5 years	7 ounces (1 3/4 cups flour)
10 years	14 ounces (3 1/2 cups flour)
15 years	28 ounces (7 cups)
20 years	2-3 pounds (8 to 12 cups)

9. **Display a variety of food packages with the nutrition facts label.** Include items such as whole milk, fat free milk, dry milk, canned salmon, yogurt, tofu, canned or frozen spinach, cottage cheese, ice cream, calcium fortified products, such as orange juice. Look at the calcium content of these products. Discuss which products are highest in calcium.

10. **Nutrition Labels and Calcium** You can use the food label to find out how much calcium is in packaged foods. All you need to know is the %DV for calcium as provided by the food and its serving size. Collect several empty cartons of dairy products, leafy green frozen and canned vegetables (kale, collards, turnip greens, and broccoli) and distribute to participants.

What does the % Daily Value tell you?

- The DV is used to describe the amount of calcium that the "average" U.S. population needs daily. To reach 100% DV for calcium, a person needs to have 1,000 mg of calcium in their diet. The % DV on the "Nutrition Facts" panel of the food label tells consumers how much calcium one serving of that food contributes to the recommended intake of 1,000 mg of calcium.
- If the DV on the "Nutrition Facts" panel of a specific food is 20% (.20), then multiply 1,000 times (x) **.20** = 200 mg of calcium per serving of that specific food.

- So, if a food has 200 mg of calcium per serving, the “Nutrition Facts” panel on the food label would show that the food contains 20% DV for calcium.
[200/1000) x 100 = 20%]

11. **Exercise + Calcium-Rich Foods = Strong Bones** Explain to participants that besides eating calcium-rich foods, exercise is needed to help build strong bones. Discuss fun ways to get exercise such as dancing, playing ball or swimming. Don't forget to identify everyday ways to exercise, such as taking the stairs and walking the dog. Make a list of all the suggestions. Then ask the participants to set goals for the week. Distribute paper or booklets so each person can make their own exercise diary. Encourage each person to work on achieving their goal. See word scramble handout: **Exercise + Calcium-Rich Foods = Strong Bones**

12. Other activities - "MOOOO Jeopardy", "Drink Milk Everyday", "Dairy Foods Guessing Game", and "Milk Taste Test".

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University of Illinois Extension provides equal opportunities in programs and employment.
This material was funded by USDA's Food Stamp Program.